Appl. No. 10/585,398
Amdt. dated Dec. 19, 2007
Reply to Office action of Oct. 01, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1- 25 (canceled)

New set of claims:

Claim 26 (NEW) An automatic weapon with caseless ammunitions wherein the improvement comprises:

- a breech piston and barrel chamber sealing device,
- a breech and barrel coupling device,
- a clip compartments sequencing device,
- a trigger safety device.

characterized in that the breech and barrel sealing device use gas pressure and be composed with:

- a ball joint (41 sept.) related to the breech piston, said joint being patellar with the barrel chamber (62) and such that:
  - the thickness of its cross section decreases regularly, according to a generating line preferentially but not exclusively curved, from the base (B) to the upper edge (O) in order to favour, under gas pressure or a narrowing chamber (62), an elastic radial adjustment of said curve combined with a torsion of the complete section (fig. 6/17) swiveling on its base,
  - the external face bears an angular sector (fig. 6/15), symmetrically distributed on each side of the largest diameter (C), advantageously matching the chamber boring in order to favour a peripheral and patellar linear contact,
- a tapered (fig. 6/15 & 6/16, A) piston chamber (62) such that the ball joint be in patellar contact with said chamber wall when said piston is reaching its course limit.

Claim 27 (NEW) An automatic weapon for caseless ammunitions according to claim 1 characterized in that the ball joint (41 eleven) be part (fig. 6/19 & 6/20) of the main piston shaft to form an integrated ball-joint piston patellar with the chamber.

Claim 28 (NEW) An automatic weapon with caseless ammunitions according to claim 1 characterized in that the ball joints (41 sept., 41 oct., 41 nov.) be arranged:

- in front of radial lights or crenels (40 thrice) distributed at the rim of the case seat located at the breech head so as to uniformly distribute the propellant gases to the inner face of the joint (41 sept, nov & eleven) and generate a uniform bore increase for a stronger contact with the chamber wall (62).
- upside-down (41 oct.) at the piston root (fig/ 6/16) to close the chamber opening with a patellar contact line of said ball joint with the chamber entry wall as soon as the cylinder head is fully closed.

Claim 29 (NEW) An automatic weapon with caseless ammunitions according to claim 1 characterized in that the barrel and breech coupling device be composed of:

- radial tenon housings (56), communicating with channels (39, 40) opening at the cartridge seat level,
- tenons (54, 55).

Claim 30 (NEW) An automatic weapon with caseless ammunitions according to claim 1 characterized in that the trigger safety (68) be composed of:

- an operating (68) lever integral with the trigger guard bolt (66) and retractable in a housing (69) of said trigger guard,
- a trigger locking device maneuvered by angular rotation of the trigger (64) following a pressure on its back face.

Claim 31 (NEW) An automatic weapon with caseless ammunitions according to claim 26 and 30 characterized in that the trigger locking device be composed of a female housing (67) to receive the warp end (66 twice) of the trigger guard bolt and a circular cam (67 twice) over a portion of angle corresponding to the backwards clearance of the trigger, said cam on which the warp end is pressing under the action of the return spring of the bolt and said housing (67) positioned in such way that its engagement by the warp end is only possible after the trigger has carried out an anti-clockwise rotation.

Claim 32 (NEW) An automatic weapon with caseless ammunitions according to claim 1 characterized in that the device sequencing the clip compartments be composed of a cartridge stopper arm (103), bearing at its end a horizontal abutment (103 twice), articulated on the back wall of the magazine well with which it is integral via an axis crossing the frame:

- either parallel to the barrel axis in order to ensure a lateral swiveling of the stopper-arm (103) and its horizontal abutment (103 twice), said swivel initiated by the rise of the front conveyer button (101) which, as soon as the last cartridge leaves the compartment, causes the swing of a transmitting rod housed in the internal side wall of the magazine well and mounted swiveling on its median axis to cooperate with an arm integral to that (103) of the cartridge stopper to involve its lateral swing,
- either perpendicular (fig. 20) to the barrel axis in order to produce a backwards rotation of the stopper (103 twice) of which the locking-arm (103 thrice) bears a pin (102 twice) at its end to co-operate with a tipping arrester hook (102).

Claim 35 (NEW) An automatic weapon with caseless ammunitions according to claim 1 characterized in that the stopper hook (102) comprises a cam (102 thrice) cooperating with the conveyer side button (101) of the front compartment in order to cause its swiveling.